

AAE 322 Commodity Markets

Term: Spring 2017

Class Meetings: TuTh 2:30-3:45PM in 184 Russell Lab

Instructor: Sheldon (Xiaodong) Du

331 Taylor Hall

Phone: 262-0699

Email: xdu23@wisc.edu

Website: <http://www.aae.wisc.edu/faculty/xdu23/>

Office hours: TuTh 1:30-2:30PM, or by appointment

Teaching Assistant: Jared Hutchins

311 Taylor Hall

Email: jhutchins@wisc.edu

Office hours: MW 10:30-11:30am

Course Homepage: The course will use Learn@UW, by which readings, class assignments, slides, and notes will be distributed.

Course Objectives:

The intentions of this course are twofold: to (1) explain the purpose of and major operations in commodity market institutions, and (2) apply economic logic and quantitative techniques to understand price relations in commodity markets. We will learn,

- (i) Mechanics of trading commodities and related assets, mainly forward, futures and options.
- (ii) Strategic approaches to trading activities,
- (iii) Information and risk management when trading goods, and
- (iv) Valuation of claims on commodities.

After taking this course, you should be able to

1. Understand the operations of institutions of commodities,
2. Be familiar with trading terminologies commonly used,
3. Analyze temporal and spatial hedging, arbitrage, and speculation strategies,
4. Value positions in forward, futures, and options markets using arbitrage analysis.

Recommended Texts:

1. Carter, A. Colin. 2003. *Futures and Options Markets: An Introduction*. Prentice-Hall: Upper Saddle River, NJ. ISBN: 978-1-57766-553-3. (Carter)
2. Kolb, W. Robert, and Overdahl, A. James. 2006. *Understanding Futures Markets (6th ed.)*. Blackwell Publishing. ISBN: 978-1-4051-3403-3. (KO)

Reference Materials

1. Hull, John C. 2011. *Fundamentals of Futures and Options Markets, (7th ed.)*. Pearson, Prentice-Hall. (Hull).

2. Chicago Mercantile Exchange. 1992. *An Introduction to Futures and Options*. CME Education Department: Chicago. (CME) http://www.cmegroup.com/files/intro_fut_opt.pdf

Grading:

The final grade for the class will be calculated using the following weights:

Participation	5%
Problem sets	20%
In-class quizzes	20%
Group project	5%
Midterm/Final exams	50%

1. About six problem sets will be assigned. Students are required to finish independently.
2. There will be two closed note midterm exams.
3. **Final exam** (optional; comprehensive): **05/10/2017 (Wednesday), 12:25pm-2:25pm, Russell Lab 184**. If you choose to take the final, your score will be averaged with that of the lowest midterm.

Other Course Policies or Procedures

1. Late assignments will be penalized with 10 points for each day of lateness, unless you have obtained prior approval, or in the case of an unforeseen emergency. Written notification from your advisor or doctor will be required in both instances.
2. Make-up exams will be given only under extenuating circumstances, for which appropriate documentation will be required, and if advance arrangements are made with the instructor.
3. Students must notify the instructor within the first two weeks of class of the specific days on which he or she requests for religious observances.
4. Accommodating Disabilities: If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me soon.
5. Academic Integrity: Acts of academic dishonesty will be penalized with a final grade of "F" for the course. In addition, university rules will be strictly enforced.

Tentative Course Schedule:

Week 1		
1/17/2017 (Tu)	Introduction	
1/19 (Th)	Introduction to Forwards	KO Ch. 1
Week 2		
1/24	Introduction to Futures	KO Ch. 1
1/26	Introduction to Futures	KO Ch. 1
Week 3		<i>Problem set 1 due</i>
1/31	Introduction to Futures	KO Ch. 1
2/2	Introduction to Options	KO Ch. 12&13
Week 4		<i>Problem set 2 due</i>
2/7	(Quiz 1) Introduction to Options	KO Ch. 12&13
2/9	Introduction to Options	KO Ch. 12&13
Week 5		<i>Problem set 3 due</i>
2/14	Introduction to Options	KO Ch. 12&13
2/16	Synthetic Futures Positions and Put-Call Parity	KO Ch. 12&13
Week 6		<i>Problem set 4 due</i>
2/21	Synthetic Futures Positions and Put-Call Parity	KO Ch. 12&13
2/23	Building Blocks of Technical Analysis	
Week 7		
2/28	Guest Lecture	
3/2	Midterm I	Discussion sessions will be held at RM 204 (Th)/150 (F), Animal Science Building
Week 8		
3/7	Option Position Strategies	Carter Ch. 8 and KO Ch. 12&13

3/9	Guest Lecture (Leo Murphy from TT)	
Week 9		
3/14	Option Position Strategies	Carter Ch. 8 and KO Ch. 12&13
3/16	Futures Prices Over Time	Carter Ch. 3 and KO Ch. 3
Week 10		
3/21	Spring break; no class	
3/23	Spring break; no class	
Week 11		<i>Problem set 5 due</i>
3/28	Spread	Carter Ch. 3 and KO Ch. 3
3/30	Basis	Carter Ch. 7
Week 12		
4/4	Guest Lecture (Fundamental Analysis)	
4/6	Guest Lecture (Fundamental Analysis)	
Week 13		<i>Problem set 6 due</i>
4/11	(Quiz 2) Introduction to Hedging I	Carter Ch. 7&9
4/13	Guest Lecture (Professor Brian Gould)	
Week 14		
4/18	Guest Lecture (Katie Burgess from Blimling and Associates)	
4/20	Introduction to Hedging II	Carter Ch. 7&9
Week 15		<i>Problem set 7 due</i>
4/25	Hedging with Options	Carter Ch. 7&9
4/27	Midterm II	
Week 16		<i>Problem set 8 (optional) due</i>
5/2	Hedging with Options	Carter Ch. 7&9
5/4	Option Pricing	